

Hobbies

WEEKLY



BOAT RACE
NOVELTY
COMPETITIONS
PHOTOGRAPHY
PHILATELY, Etc.

April 2nd. 1938

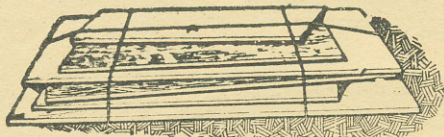
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Vol. 86, No. 2215

THE FRETWORKER'S AND
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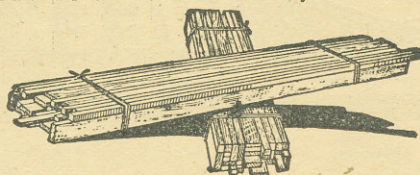
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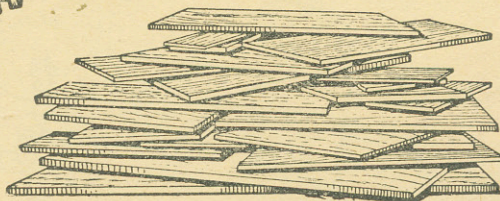
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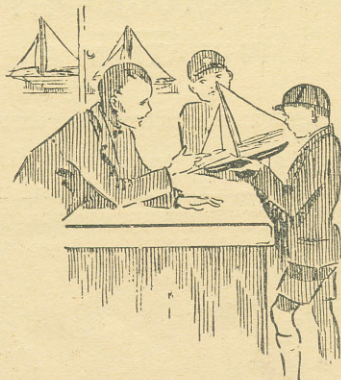
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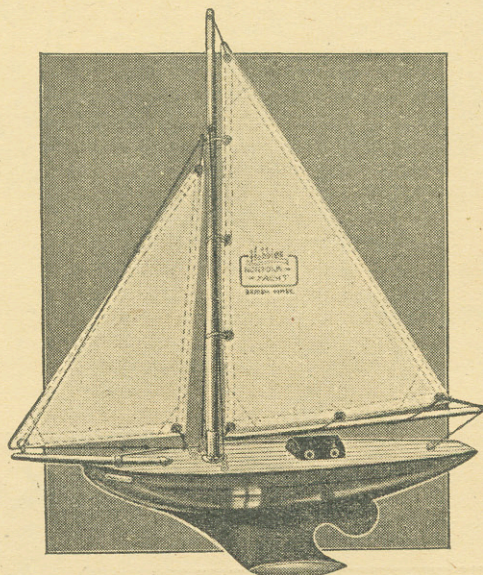
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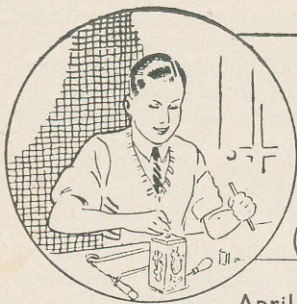
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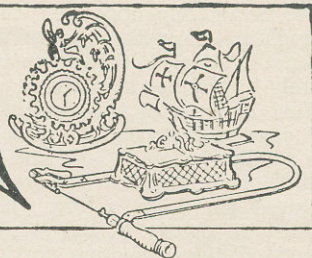
HOBBIES

'Norfolk' Yachts



Hobbies

WEEKLY



April 2nd. 1938

Vol. 86. No. 2215

NO doubt you have seen those musicians on the stage or even occasionally in the street, who have what appears to be a little cigar box on the end of a stick, and from which they produce the most realistic and pleasing music?

Really the instrument is what is known as a Japanese fiddle, and the opportunity for making one is provided by the design and materials this week. Thousands of them have been made from previous designs which we have published, and we are sure the opportunity will appeal to a large number of new readers.

Anyone Can Learn

One of the great joys of the instrument is that almost anyone can play it with a little practice. Although only having one string, the whole range of notes can be obtained from it, and almost any tune can be played.

Indeed, we supply instruction books on playing

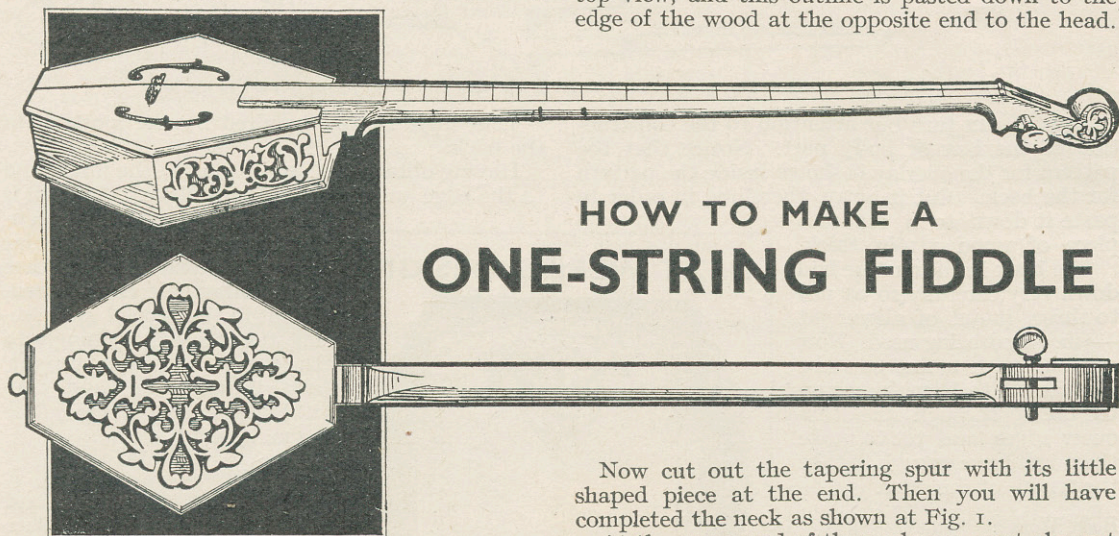
even more easy. The shaping of the neck is the principal work, as the wood for this is 1in. thick.

Notice, too, that the patterns are given in two separate pieces on the sheet, and that the shape along the top and the sides is given. The board must be 1½ins. wide and the pattern for the side view of the neck is pasted on this wide surface at one end.

Completing the Neck

Then the body part of the neck (side view) is pasted to the wood at the other end so that the two lines marked I join together. The wood for this should be of beech to provide strength and suitable grain. Now cut out the whole length of the neck according to the shape of the pattern.

Next you have to shape up the tapering piece which passes actually through the body of the instrument. For this there is a pattern of the top view, and this outline is pasted down to the edge of the wood at the opposite end to the head.



HOW TO MAKE A ONE-STRING FIDDLE

(price 2/-) which contain not only diagrams showing position of notes and early scales, but a large number of well-known tunes which the musician can easily accomplish. The drawing of the completed instrument herewith shows the general construction, whilst the smaller drawings show details of the box portion.

The whole thing can be cut and completed with the fretsaw, and as the patterns are full size they are pasted down to the wood to make the cutting

Now cut out the tapering spur with its little shaped piece at the end. Then you will have completed the neck as shown at Fig. 1.

At the upper end of the neck you must also cut through a slot to take the key, and a detail of this is shown on the design sheet. Chisel it out 5/16in. wide ¾in. long at the bottom tapering to 1in. long at the top. This is the part marked X on the pattern.

Clean this opening up thoroughly then bore a hole through each side to take the peg. It is advisable to have the peg supplied handy, in order to ensure the diameter of the hole being correct.

The peg itself tapers so the hole one side will be

larger than the other, although of course, the two must be exactly opposite. Get the holes small enough to allow the peg to fit tightly, because when the string is turned up it should hold taut merely by the peg in position.

Just in front of this opening, and on the top flat edge of the wood is cut a small slot to take the smaller bridge. This slot is barely $\frac{1}{8}$ in. wide and the same depth. A piece of hard wood must be used $\frac{7}{8}$ in. long, $\frac{3}{16}$ in. wide and $\frac{1}{8}$ in. thick.

Bury it tightly in the slot in the neck, then round off the projecting portion just sufficiently to keep the string raised just above the neck itself.

Finally we have the rounding of the long body part of the neck to do. The top surface, of course, is flat, then it tapers gradually to a rounded curve on the underside. The shaded section on the pattern shows this clearly.

The whole of the neck can now be thoroughly cleaned up with glasspaper and laid aside.

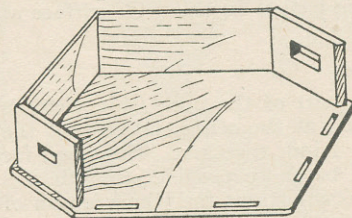


Fig. 2—How the body is formed, showing mortises in bottom

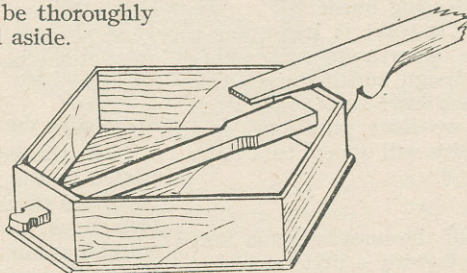


Fig. 3—The neck fits through the body like this



Fig. 1—A broken detail of the neck and lower forming part to the heel

Now we can turn our attention to the construction of the box or body part. Notice that the pattern for the overlay is shown inside the pattern for the back. Cut it away, therefore, in order to paste it down to a separate piece of wood $\frac{1}{16}$ in. thick.

The back itself must be laid down very carefully so as not to throw it out of alignment— $\frac{1}{8}$ in. wood being used. Now cut out with a fine saw the mortises A to F, making sure to break through the thin outer edges, and yet to make them just large enough to take the tenons of the sides.

Body Work

Next get out the two end pieces forming the top and bottom of the body. These fit in at the joints A and F, the former being at the top end. Notice the hole cut in the centre of each of these two pieces which must exactly accommodate the projecting portion of the neck itself.

Indeed, the actual aperture

should be tested on to the neck piece before actually putting it into the back. The smaller slot (H) accommodates the other end of the tapered piece. Notice the edges of both these pieces must be chamfered to the angle shown by the shaded section drawing.

This is to allow the sides to come up close to them as a satisfactory joint.

The Tenoned Sides

Now we can get out the long sides and two of these are required, each according to the pattern shown with the tenons marked B, C, D and E. Wood $\frac{1}{8}$ in. thick is used, and at the dotted lines shown across the pattern a little groove has to be made to allow the part to be bent.

Cut this across with a V tool or chisel, but be careful not to take it right through the wood.

The two extreme ends of this part also have to be chamfered so that when bent into position they lie snugly against the end uprights.

It is advisable to steam these sides near the grooved piece in order to make them more pliable, gradually bending until the right angle has been assured.

This angle is that required by the mortises in the back.

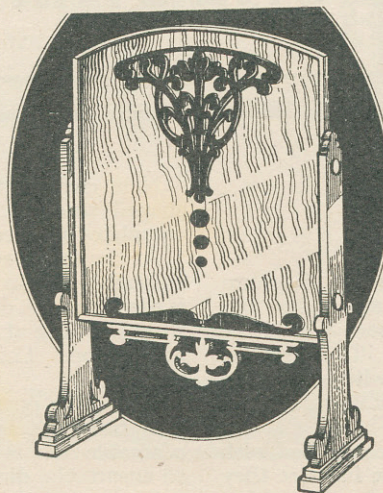
Having obtained it, apply glue to the joints and to the edge and fix the sides in place. A detail is shown at Fig. 2 with the construction of the box so far completed and the mortises in the other side clearly seen.

Put in the second side seeing that they fit up snugly to the top and bottom upright, and if necessary, add tiny stiffening pieces in the joints to make more secure.

Test the Neck

Wait until the glue has set firmly before putting in place temporarily the neck. We can thus test out the long tapering piece which goes through the hole, and can ensure that there is just room for the top of the body to go under the other projecting piece of the neck. The detail at Fig. 3 shows the fitting of this in place. Take the whole thing away again, then cut

NEXT WEEK'S DESIGN



and glue on the breast itself. This should be of suitable wood musically, and instrument pine is undoubtedly the best. It is $\frac{1}{8}$ in. thick with two shaped sound frets cut in it.

In order to provide greater strength little fillet pieces should be glued near the upper edge of the body sides. This will give greater surface to the glue when the top is fitted on. No nails or screws should be used.

Adding Overlays

The addition of the overlays can now be made. There is one large one on the back, two smaller ones on the body and a tiny one to decorate the side of the neck at the top.

Finally the bridge is cut from a piece of $\frac{1}{4}$ in. wood and tapered down to about $\frac{1}{16}$ in. at its upper edge as shown by the shaded section in the other pattern. The bridge, of course, is not glued in place, but stood on the body about 3 to 4 ins. down.

The string is tied round the knob-like projection through the body, carried over the bridge and the smaller bridge at the top. It is then turned

round the peg and finished by putting through the hole therein.

Tuning

Thus the string can be tightened according to requirements, and tuned up to the correct pitch. It is impossible to give the exact markings for the frets on the neck, but the first note can be obtained from a tuning fork or the piano.

From there you can work on the whole scale marking them off on the neck by running little sawcuts across when the exact position has been found. Details of these notes are shown in the book of instructions previously mentioned.

The fiddle can be varnished, with the exception of the top portion of the body under the string.

MATERIAL SUPPLIED

Wood.—For making the Fiddle we supply a parcel of Whitewood and Spruce for the body, and Beech for the neck. Complete for 2/6 or post free 3/-.
Fittings.—A suitable shaped peg, and string 6d., Fiddle Tutor 2/-. post free 2/8.
A complete parcel 5/6 post paid.

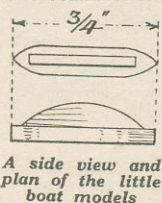
Follow the Wireless Commentary with A BOAT RACE MAP MODEL

THIS is Boat Race Week, and on Saturday all of us will be getting wildly excited with our respective enthusiasm for either crew. The fact that Cambridge has won for so many years does not prevent us having a sportsman's hope that the records will be broken sooner or later. In consequence, when the boats line up we shall follow on the wireless their progress with as much keenness as ever.

And here is an excellent way in which we can really visualise the Boat Race, and at the same time follow the actual positions of the boats in the winding course of the river.

Follow with Boats

In the centre pages of this issue is a large plan of the four-mile course with the river itself purposely extended in width. On this river we can actually place little toy wooden boats, passing them along according to the positions given by the commentator.



A side view and plan of the little boat models



The boat ready to use

The best plan is to tear out the centre pages and paste them down to a piece of wood. Then you can buy two tiny boats similar to the details herewith. They can be cut from $\frac{1}{4}$ in. material quite easily with the fretsaw.

The size of the boat itself is shown, and the little finger pieces added upright to make it the more easy to move along the river. Of course, the keen worker will make a much more realistic

boat from a long narrow piece of wood, and some even may complete it with crew and paint it up in realistic fashion.

It must have a flat waterline base in any case, and if it is not made large enough to have a finger piece, then a pin can be stuck into it to push along as needs be.

Ready for the Race

By this means you can easily follow the race and at the same time get a little further excitement by putting the boats along as they will be actually progressing on the river itself.

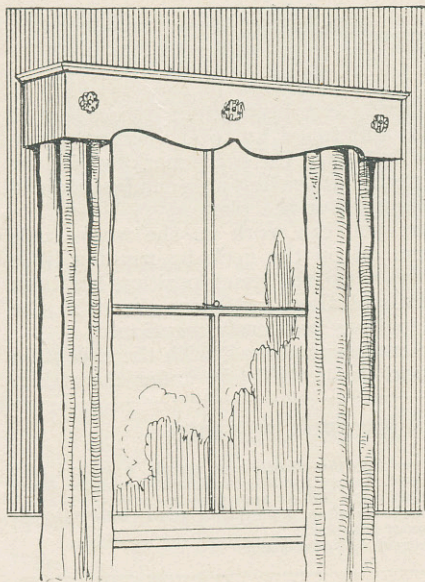
Of course, there is no reason why you should not elaborate on the whole thing and add starting posts and have little bridges and even paint the river and bank if you are at all a draughtsman.

In any case, the plan on the centre pages will be exceedingly useful, and will fill a popular want when the Boat Race commences on Saturday next.

Move with the Boats

Have your board and boats all ready for when the announcer commences his commentary, then when they set off you can move each boat along the river according to which side it is. We have shown the Surrey side, and you will undoubtedly be told which chooses that as the winner of the toss.

From there you go on to the various points as they are announced, following through the places of note such as Craven Steps, Harrod's Stores, Hammersmith Bridge and so on. All will undoubtedly be mentioned by the commentator, and you can move your boats along to these points.



WINDOW PELMETS MADE IN WOOD

$\frac{1}{4}$ in. stuff, is finally screwed on, and over this finished frame is screwed the plywood pelmet. If it is possible, the grain of the plywood should run upwards, and the front should run through, with the ends brought up to it and all securely fixed to the framing with small countersunk screws as in Fig. 4.

For Fixing

The fixing for the pelmet, although not presenting any great difficulty, calls for a little care and attention to detail. Most windows have a moulded architrave nailed round on three sides, and it is a comparatively easy matter to fix the pelmet frame to this in the manner shown at Fig. 5.

Three or four small angle plates are first screwed to the face of the architrave, two being put on the side uprights, and one or two on the cross piece over the opening.

Framework

The pelmet frame is brought to rest over these brackets and screws finally put in to make all secure and rigid.

It must be borne in mind that if this method of fixing is adopted the length of the front rail with end brackets attached must be made the same length as the architrave plus $\frac{1}{2}$ in. each end. The whole will then fit properly as the cut-away figure 5 shows.

If the pelmet is required to be a few inches longer than the architrave, then the top board

WINDOW pelmets are very popular, and take the place of the older type of finish to the head of a window, viz., the "frilled" curtain material usually strung upon an expanding steel spring. The pelmet cut out in wood, is much cleaner, and much more stylish as such a variety of designs can be adapted, and changed easily to suit the colour scheme of a room.

Regarding the size to which they should be made, much depends upon the size and proportions of the window. A tall narrow window demands a wide or deep pelmet, with ends also designed deep and narrow.

Helpful

A wide window having say three or more lights and more or less squat in height, would naturally demand a narrow pelmet with hardly any dropped ends as shown in two of the designs Figs. 1 and 2.

A depth of about 9 to 10 ins. is usual for a pelmet, and the distance from back to front about 4 ins. This, of course, depends somewhat upon the type of curtains to be used.

The framework to support the pelmet, which is generally of thin plywood, should be made up from light woodwork about $\frac{1}{4}$ in. thick and to the construction shown in Fig. 3.

Two solid end pieces cut from $\frac{1}{2}$ in. stuff and with slightly shaped lower ends and with notches cut at the top corners are first made. Into the notches are nailed or screwed a light rail, about 2 ins. deep perhaps, according to the span of the window.

A top board, also of

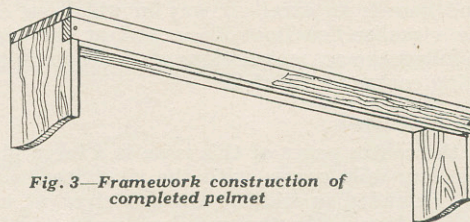


Fig. 3—Framework construction of completed pelmet

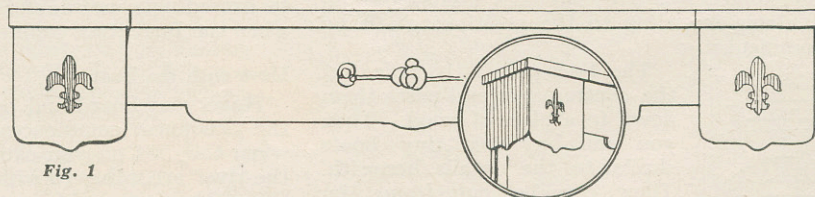


Fig. 1

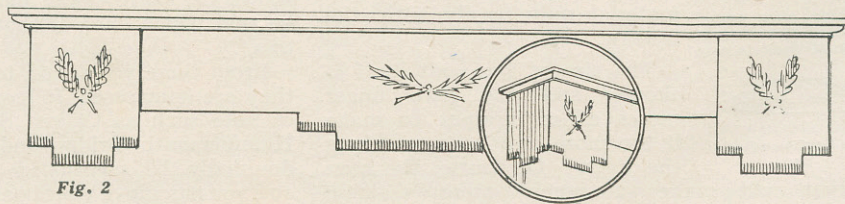


Fig. 2

should be made the required length and the ends blocked out to suit, and the angle plates rearranged in same manner to again be fixed to the architrave, or of course, the brackets at the ends of the frame could simply rest against the wall at each end.

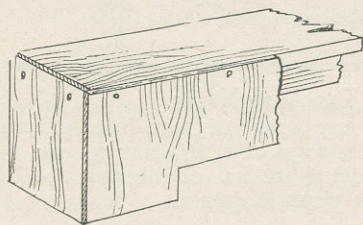


Fig. 4—Detail of construction

The plain but effective pelmet shown in our sketch consists of three simple pieces with a piece of plain moulding mitred round on the three sides. Three raised wooden ornaments are sufficient embellishment for the front when the painting is completed.

The outlines of the pelmets in Figs. 1 and 2 are typical of those mostly in use at the present time,

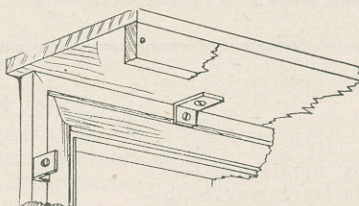


Fig. 5—How to fix to window

and by having the two ends dropped and made separate, greater character is obtained with little extra material and labour.

The little circled details show how the returned ends are shaped to be in keeping with the fronts.

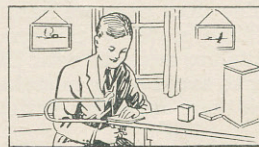
Along the top edge of pelmet, Fig. 1, there is a plain fillet of wood attached, while in Fig. 2 a simple moulded piece is put along with end pieces mitred and screwed through to the framing.

The suggested finish for any of these pelmets is matt enamel or paint or even distemper evenly laid on. The

framing should be painted to match the surrounding paint work.

Any reader desiring to have either of the two designs shown here, enlarged to suit their own requirements can have them from Hobbies Weekly by giving depth and length required and enclosing stamped addressed envelope, and 3d. in stamps.

"Try your hand" at this simple FRETWORK CROSSWORD!



HAVE you nothing to make, read or do for the next half hour or so? If so, let this Fretwork crossword claim your attention. The minutes will fly and you will enjoy every one of them.

There is nothing more gratifying than to overcome some difficulty. But, this crossword isn't difficult—it's a simple knowledge test in a pleasant way. You won't gain a prize for the correct solution, but you do gain a little amusement.

All the clues have straightforward answers and next week you will be able to check up on the correct result. As this puzzle is the last of an interesting series of six, we hope you will write in and let us know if you liked them.

CLUES DOWN

1. This smoothes wood wonderfully.
2. The Coronation Coach was the most popular one ever published.
3. Large, intricate fretwork is this to some workers.
4. North West (abbr.).
5. A style of fretwork consisting mostly of built-up layers of wood.
8. A fretmachine should be given a spot of this now and again.
10. A powerful adhesive.
11. In butt-joining, one can often give a lot of trouble.
17. To saw quickly.
19. A thin layer of wood.
20. One is easily snapped.
21. Fretwork Enthusiast (abbr.).
23. A kind of flat nail.
24. Workers should take great pains in building and rigging a model one.
27. A singular piece of work.
30. In the centre of "knot."

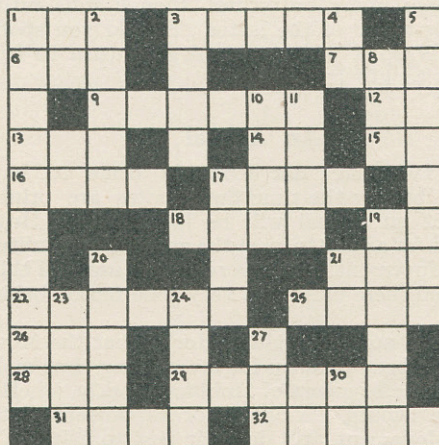
CLUES ACROSS

1. Name of a popular fret-machine made by
25. Hot water will often raise this in soft wood.
26. A girl's Christian name.
28. Short for "radius."

- Hobbies, Ltd.
3. This must be cut carefully to fit its mortise.
6. The fifth Sign of the Zodiac.
7. Many prizes are, especially for models at exhibitions.
9. It must be pasted down with care.
12. Indian Territory (abbr.).
13. To prosecute by legal process.
14. The sixth note of the scale in solmization.
15. Behold!
16. There is always a ready one for work at church bazaars, etc.
17. It is easy to do this to an intricate piece of work through haste.
18. Many of the smaller pieces of waste fretwork make this for the fire.
19. Victoria Regina (abbr.).
21. To charge a small amount of money.
22. That sold by Hobbies, Ltd. stains as well as finishes your handiwork.

29. This should be immediately applied to cut fingers.
31. To jump.

32. It is hard to hinge these properly sometimes





Scout Notes and News!



April 1938

ONE of the most interesting months of the year this. It will herald the commencement of the camping season at Easter. St. George's day on the 23rd will be the first since the Coronation and it is hoped that His Majesty will continue to review First Class Scouts at St George's Chapel Windsor. This pleasing ceremony gives a great fillip to the movement and shows the personal interest which the Royal family takes in Scouting.

All our past experience will be brought to bear on this year's scout camping and I would like to emphasize again that it is up to all members of the movement to set an example in camp hygiene, behaviour and methods.

Nothing does us more harm in the eyes of the public than slovenly campers. For that reason all Scouts are urged to wear their correct uniform, in order to avoid being mistaken for other campers of which there are such a variety. Good Camping.

What to Look For

ONE might almost term this the hovering month because it hovers between winter and summer and therefore is somewhat of a slack month as far as nature study is concerned. Our friend the Hedgehog will appear in time for the Pheasant's eggs and a few of our summer visitors will be visible notable among these will be the Cuckoo whose monotonous cry will soon tell us of his arrival.

Leaves and flowers appear everywhere, and with them many butterflies, though it is rather early for many of the latter. Should you spot a Queen Wasp it will be a real good turn to fruit farmers to kill it.

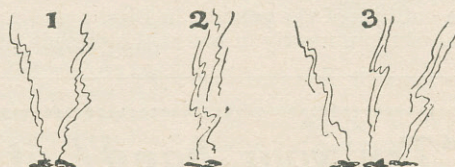
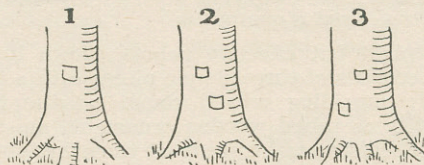
An Appeal

THE facts have not definitely come to hand yet, but by the time these notes are printed I expect an appeal will be launched by Headquarters for a fund to meet the growing expenditure of the Movement. This is rather an unusual thing to do and there must be a very good reason behind it all.

There is not the slightest doubt that the Movement has been hard up for a very long time and I hope that all readers of Hobbies Weekly, whether they be Scouts, Ex-Scouts or supporters of the Scout Movement, will do their best to help. The sum aimed at is, I believe, £500,000.

Tracking Notes

FURTHER to my notes of last month, here are a few more ways in which nature can be used in our tracking instead of littering up the countryside with pieces of paper.



Here is the solution to the sketches :

Trees. (1) This road to be followed.

(2) Turn to the right.

(3) Turn to the left.

Smoke. (1) Help. I am lost.

(2) Camp is here.

(3) Good news.

Using this type of indications for tracking will help to make it more interesting for your Patrols and I recommend the use of these to all up to date Patrol Leaders.

To Light a Fire

NOW you Patrol Leaders, it will save you a lot of trouble later on if you instil the following rhyme into your Tenderfoot!

First a curl of birch bark as dry as it can be

Then some twigs of soft wood, dead but off a tree.

Last of all some pine knots to make a kettle foam,

And there's a fire to make you think you're sitting right at home.

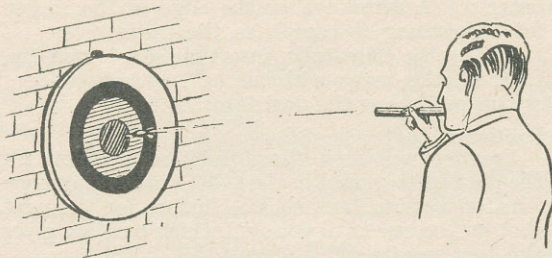
Tenderfoot Relay

HERE is an interesting outdoor stunt which will make your Tenderfoot work more enjoyable. Decide on a hike and divide the journey into parts, one for each Tenderfoot test and ask your Rovers to be judges.

Start your patrol off and at each post they have to answer a question on the tests. If the answer is correct the Scout passes on to the next post. An incorrect answer incurs a penalty of a minute wait before proceeding.

Make your test as practical as possible and remember the same idea can be carried out more successfully on the Second and First Class tests.

The Skipper



MANY of the Indian tribes of South America have no other weapon but the blow-tube and are so expert with this deadly tool that they can plant their missiles within a $\frac{1}{4}$ in. of the intended mark at a range of fifty yards.

You can never expect to become as proficient as that, but you can get a lot of fun from a well made tube and darts and even become so expert that you can hit a 3 in. bull at almost every shot from 20 yards or even more.

Start Small

To get as good as this, however, you must follow the Indian method and start with quite a small tube until you can hit the bull with certainty from three or four yards. Then gradually increase the size of tube and darts and at the same time increase the distance from the target. In this way you will soon become an expert and train the eye in a wonderful way, as well as increasing your lung power to a tremendous extent.

The first thing to take in hand is the making of the tube and for a commencement this should be about 18 ins. long, and $\frac{1}{2}$ in. or so internal diameter.

The Tube

The tube may be constructed from any material suitable, even paper rolled tightly around a wooden former and glued, answering the purpose quite well. Better results and accuracy will be obtained, however, if a metal tube or one of celluloid can be obtained. Very good shooting having been seen from the outer barrel of an old bicycle pump.

Whatever the type of tube used there is one great point to be observed. The inside must be as smooth as it is possible to make it in order that no resistance may be present to retard the passage of the dart.

The mouthpiece, too, should be smooth and comfortable for the mouth, or the lips will become sore after a long spell of practice. The illustration shows how the end of the tube can be made quite comfortable for the lips and in no way affect the balance of the blow-tube for accurate shooting.

The Darts

The darts must be accurately made so while they fit the tube closely, they will slip through it at great speed when blown with the mouth.

Procure a number of corks of fine grain and a little larger than the diameter of the tube and with a file and glasspaper shape them to the form shown in the drawing. Take care to make the rear end quite flat and the sides perfectly round

MAKING A BLOW-TUBE

and smooth. Drill a tiny hole through the centre of the cork and through it push a large darning needle until the point projects for about $\frac{1}{2}$ in.

Feathered Tips

Then nip off the eye end with a pair of pliers and trim the end smooth and level with the cork with a file. Divide the circumference of the cork equally into three parts and make a small slit at the rear end with a sharp knife at each point. Now get a feather, cut it into lengths of about 1 in. and split the quill of these pieces in half, as shown.

Smear a little glue on the halved quill and press it into the slots, so that a three-winged feather propeller is formed. You will get the exact idea of this from the sketch.

Balance

The darts must now be balanced accurately, if good shooting is to result, this being carried out in the following manner.

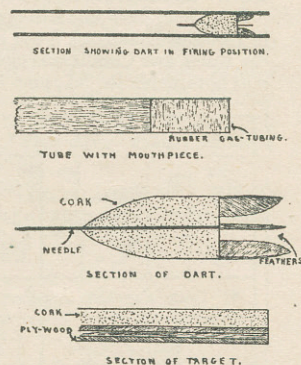
Find the centre of balance by resting the cork on a knife edge and then ease the back end by lightly rubbing it with glasspaper until the needle point end just tips over the blade. Great care must be taken not to overdo this and make the point too heavy, for should this happen the dart will not travel very far before it begins to fall to the ground.

The making of the tube and darts completes the most important part of the work and as already mentioned, the size of these may be increased as progress is made with shooting.

When larger gear is made, however, increase only the length of the tube and darts, do not increase the diameter very much or sufficient force will not be available to drive the dart very far. Keep to about $\frac{1}{2}$ in. inside diameter, and certainly not larger than $\frac{3}{4}$ in.

The Target

The target is made from a sheet of plywood sawn to a circle of 18 ins. diameter and covered with sheet cork at least a $\frac{1}{4}$ in. thick. If it is impossible to obtain a sheet this size or pieces to make it up, try the following method.



Get some cork dust—the greengrocer will have lots he will be glad to get rid of—and mix it to a kind of semi-liquid paste by stirring it into hot glue. Now coat the plywood disc with glue and spread the hot glued cork dust evenly over it. Press it well down with a piece of smooth board until it is at least a little more than a ¼ in. thick.

Allow the glue to set and harden and then level off the surface by rubbing it with glasspaper until it is quite smooth and with a solid surface. At the same time round the edges where the cork has over-lapped the plywood.

Marking the Target

Mark the target off with a centre circle of 3ins. in diameter, as the bull's-eye and paint this red. Then strike an 8in. circle as the inner and paint this yellow. A 10in. circle painted black forms the magpie, while the remainder of the target is painted white for the outer. Scoring is the same as in rifle-shooting—bull 5, inner 4, magpie 3,

outer 2. A screw-eye at the edge of the target for suspending it completes the outfit.

To fire the blow-tube, insert the dart from the rear, fill the lungs with air and with a sudden, strong puff, blow the dart into the tube.

Position of Dart

Practice will soon show the best position for the dart to be placed in the tube, push it up about 1in. for a start, then a little further for the next shot and so on, until you find which position gives the best results.


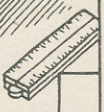


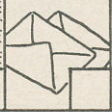






When aiming, sight the tube a little above the objective, for the dart drops a little in its travel. The longer the distance fired, the greater the amount of drop; even the great shells do the same thing and the curve they take is known as the trajectory of flight.

You can arrange some shooting matches between your chums and have a great deal of fun, if you get them to make blow-tubes and darts for themselves.

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PICTURE PUZZLE		No 2	
G B S			
5. THIS ALWAYS ANNOYS MOST PEOPLE.			
		SAT 10 S	D T
6. HANDS GO TO THIS REGULARLY.			
Y F			
7. A BAD ONE MAKES US OLDER.			
		T M	
8. ALWAYS A GOOD ONE AT C.F. MATCHES.			

WHAT YOU HAVE TO DO

Collect the four coupons which will appear each week and complete them in ink according to the clue sentences.

To get the answers to the clue sentences, study the pictures and pencil down (in the blank spaces provided) the INITIAL letters of the things they represent. Alternative words must also be considered. The alternative LETTERS of same are shown in white in groups of two's and three's. You may use any one of them which you think gives the best and most apt answer—but only ONE, please. Two letters in a single space will be disqualified.

Should you happen to spoil a coupon you can obtain fresh copies of Hobbies Weekly from our Back Number Dept., providing you enclose 3d. in stamps. No Competitor can send in more than two complete sets of coupons, there being four in the set of Puzzles numbering from 1 to 16.

Full details of Rules and closing dates will be given with the last set of pictures in two week's time.

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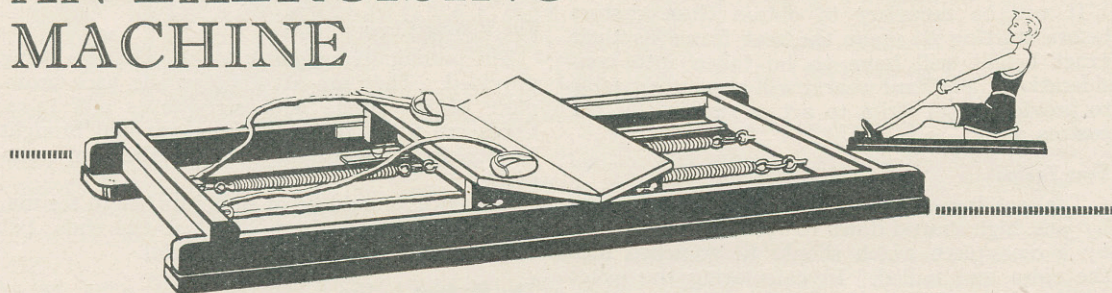
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In the Overseas Section the two principal prizes will be Goods value 10/6 (1st) and Hobbies Weekly Free for 6 months, with numerous consolation prizes.

2nd WEEK'S PICTURE—ONLY 2 MORE

AN EXERCISING MACHINE



THE question of keeping fit is important, not only to those who are keen sportsmen, but to the ordinary individual, for in these days of bustle it is the fit who win every time. Various kinds of sport may be taken up with the idea of keeping in good condition, but for exercise alone it is difficult to improve on a machine of the kind described here.

It may be used all the year round notwithstanding the weather, and starting with light exercises at first, they may be increased as a greater degree of training is attained. Sportsmen interested in football, cricket, tennis and kindred games will also derive great benefit from training on the machine during the close season.

Practically every muscle is brought into use by the exercises, and an all round development of the body is assured. Not only the young, but the middle-aged will benefit by regularly using the machine.

The boy or man interested in light carpentry will find the construction of an exercising machine to be a light task, nor will the cost need much consideration, as the fittings are easily obtainable.

Making the Frame

The drawings above show a finished machine, and the way in which it is used, while those at Fig. 1 give the dimensions to which it should be made. Before the work is actually commenced it will be advisable to carefully study the detail drawings at Fig. 2, to grasp thoroughly all points of the construction.

The exerciser is made in the form of a frame, for which good quality deal, or hardwood rim, thick should be used. The sides are exactly 4ft. long by 2ins. wide, and the cross-pieces 1ft. 2½ins. long by 2ins. wide. Fixing these four pieces is rather important, and should be carried out as strongly as possible.

With this in view it will be a good plan to cut trenches ¼in. deep, 2ins. in from the ends of the sides into which the cross-pieces may fit, these joints may then be glued and fixed with nails. It will be necessary to see that the frame is quite true—that the cross-pieces stand at right-angles to the sides—before the glue sets.

For this the angles could be tested with a set square, or the frame measured diagonally from corner to corner.

Continuing the construction, two bottoms 4ft. ½in. long by 3¼in. wide are prepared and fixed under the sides and cross-pieces. The inner corners should be neatly shaped, and the bottoms are fixed to overhang the sides ½in. at the outer edges, nails being driven into both sides and cross-pieces.

The frame is completed by nailing a foot-rest 1ft. 4ins. long by 1½ins. wide, with the inner edge neatly rounded, above the front cross-piece.

Making the Seat

The seat is the final piece of construction, and its exact form will be seen in the detail drawings. For easy running there is nothing better than

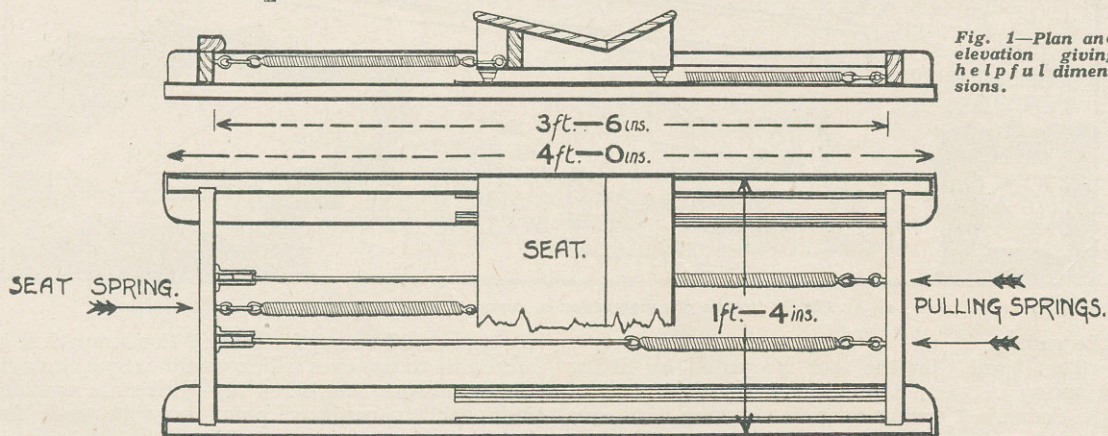


Fig. 1—Plan and elevation giving helpful dimensions.

ball-bearing castors, four being fixed under the seat frame, and two at each side.

It will be necessary to obtain these castors before starting to make the seat frame as their exact height will have to be taken into consideration. For hard wear it will also be advisable to provide metal strips to act as runners for the castors.

Seat Frame

The seat frame is made with two sides 1ft. long by 3ins. high shaped down to 1½in., and connected by a cross-piece which should be trenched into the sides and nailed. In calculating the exact width of the frame, the height of two castors and thickness of metal runners will have to be deducted from the width between the sides of the frame, which is 1ft. 2ins.

The seat is completed by nailing on two pieces of ½in. wood 1ft. 4ins. long, and finishing the edges with a neat round over.

Seat Runners and Springs

The metal runners should be about 2ft. 3ins. long by ¾in. to 1in. wide and ⅛in. to 3/16in. thick. A few countersunk screw holes should be provided for fixing the runners to the sides and bottoms, but the holes should only be countersunk sufficient to allow the screws to fit in level, or they will cause uneven working of the castors. The latter should be screwed on the seat frame first, a trial being then made for the best positions for fixing

fitted in the cross-pieces of the frame and seat for its attachment with metal clips or open links.

The Pulling Cords

The pulling strings are like the seat, two being provided. They are attached to the back cross-piece of the frame with screw eyes and links. Cords are fitted to their front eyes and brought forward to run over pulleys fixed to the front cross-piece.

The cords should be of sufficient length for use, after handles have been fitted at the ends, but this can only be determined by trial.

The Machine in Use

In using the machine, the seat is occupied with the feet resting on the foot-rest, the handles attached to the cords and pulling springs are then grasped and the legs are extended to force the seat backwards and bring the pulling springs into action.

The strength of seat and pulling springs could be varied according to the age of persons using the machine. It will be possible to obtain springs of varying strength from an address the Editor can supply. All springs should work quite level in the frame, the screw eye for the seat spring should be placed as high up on the front cross-piece as possible, while those for the pulling springs should be kept low down.

If there is any fear of the cords or springs touching the cross-piece of the seat frame, small

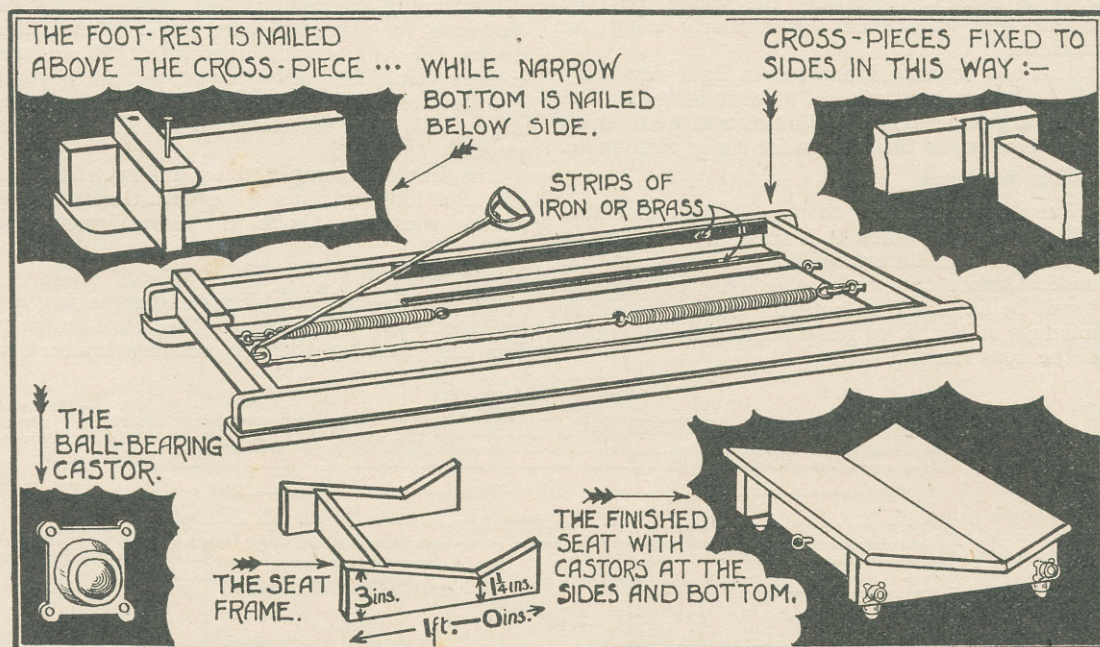
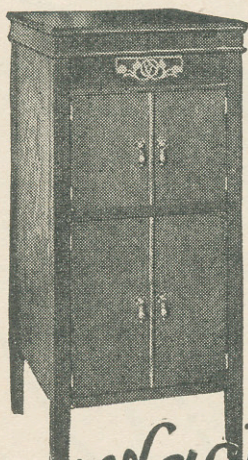


Fig. 2—Details of construction of runners, seat, castors, etc.

the runners.

The "pull" on the seat is created by fitting a spring between it and the front cross-piece of the frame. A spring roughly 1ft. long with eyes at each end will be suitable, while screw eyes are

recesses could be cut for them. For strength it is advisable to use eyes which would extend through the woodwork and screw up with nuts outside. Stain and varnish or paint may be used for finishing the completed machine.



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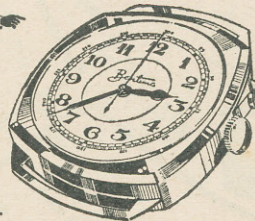
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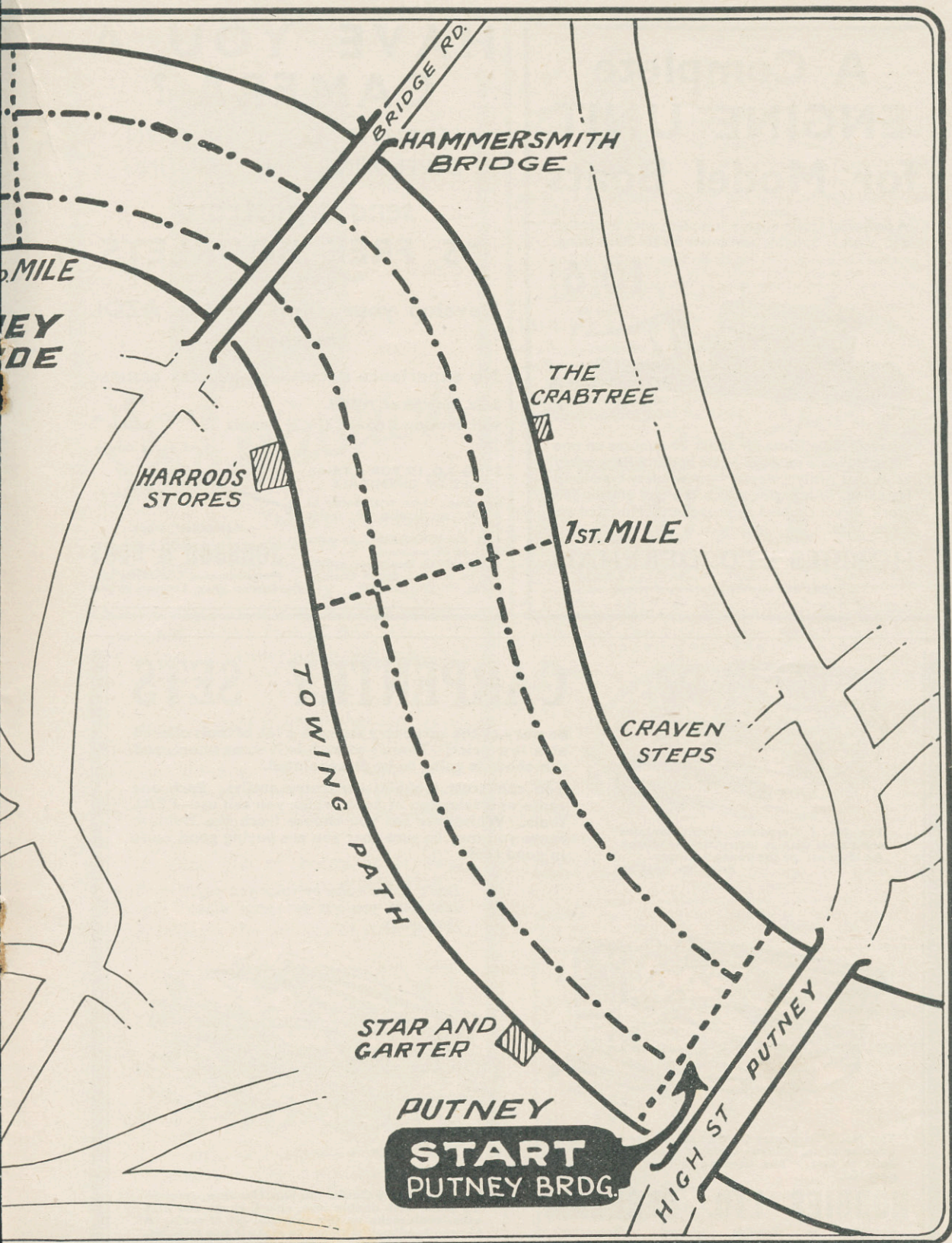
CHISWICK BRIDGE

WHITE HART

4TH MILE

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SHIP INN

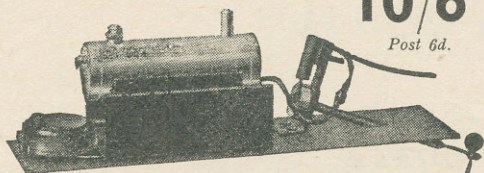


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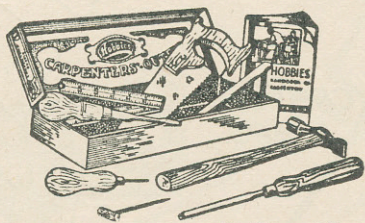
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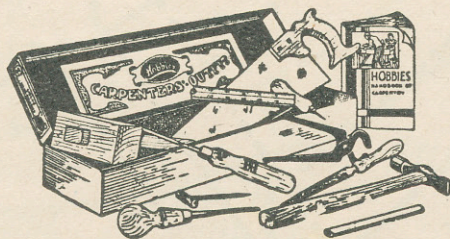
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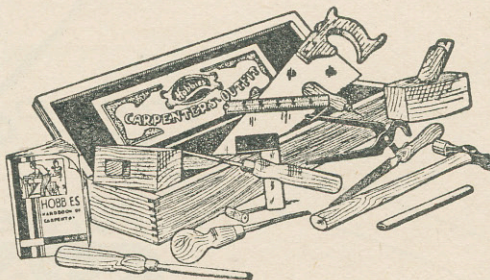
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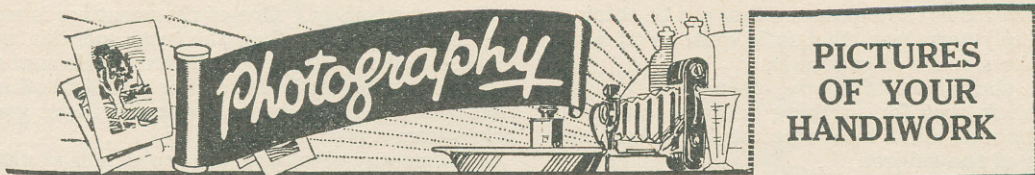
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PICTURES OF YOUR HANDIWORK

FRETWORK enthusiasts and other handicraft workers who also possess cameras often try to secure snaps of their work, sometimes with success and sometimes with the decided opposite.

Taking items of woodwork is not quite so straightforward as ordinary picture-making but it is not hard, and if just a little care is taken quite good results can be obtained with the simplest of apparatus.

The first thing to do is to set up the piece of work you wish to photograph in good even light near a window, a position like this for several reasons giving better results than out in the open air.

Study Position

The item should not be placed quite squarely to the window but askew so that while the front of it will be well illuminated, there will also be a very distinct shadow down all the edges.

This it will be found makes the picture stand out sharply and gives an impression of "relief," that is an impression that the subject is standing out from the paper.

The object should be about six feet from the window to allow of the camera being fitted up as shown in the sketch (Fig. 1).

Background

Before placing the camera however, study the background. This must be plain and be of something that will photograph grey, or pure white. A sheet of white card pinned to the back of a chair at the right height and placed some little distance behind does very well.

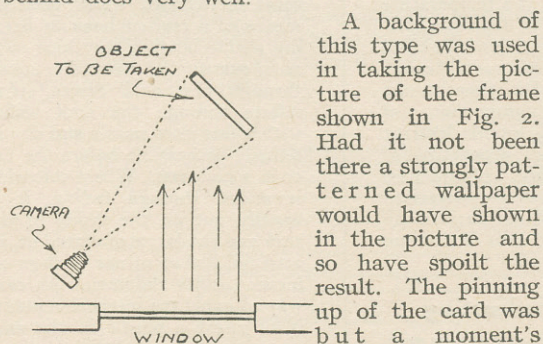


Fig. 1—Position of object, camera and light

there is something white under the subject also. If you have a very large sheet of cardette or white paper at your disposal it is a good idea to place the subject on one end of this and then curve it up behind, securing it to a chair or anything that is convenient.

A background of this type was used in taking the picture of the frame shown in Fig. 2. Had it not been there a strongly patterned wallpaper would have shown in the picture and so have spoiled the result. The pinning up of the card was but a moment's work.

See to it also that

This has the effect of making the foreground merge into the background without noticeable break which, in some cases, gives a very pleasing effect.

Being sure that all this is in order, let us turn our attention to the camera. This must be placed as Fig. 1 and will have to be on something quite firm, say a table or box, but if the latter, see to it that it is absolutely rigid and does not sway.

The trouble with most simpler cameras is that they are not in focus at less than about eight feet or more. But this can be overcome by putting

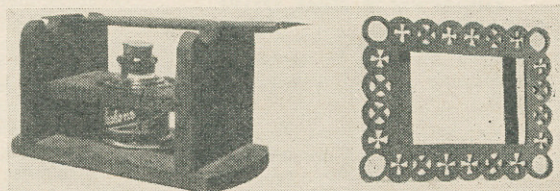


Fig. 3—With 15 mins. exposure, cheap camera under gaslight burner

Fig. 2—Against a sheet of white card

the smallest stop before the lens, that is putting the smallest of the holes which can be placed before the lens is in position.

Should your camera only have one "stop," a smaller one can be fitted temporarily by gumming a small piece of black paper over the lens opening in which has been made a small clean-edged hole of about $\frac{1}{8}$ in. diameter.

A Small Aperture

Such a hole can be best made by touching the paper with the red hot end of a knitting needle.

As has often been explained in these pages, the putting of a small opening before the lens has the effect of bringing items nearer the camera into sharp focus that otherwise would be quite fuzzy.

So, with the camera thus equipped, it can be moved to about four feet from the subject which will give in most cases quite a nice sized picture. At eight feet, unless very big, the handiwork would photograph too small to be of much use.

Now one other point before the exposure is made. That is the getting of the picture nicely on the film. At eight feet a view-finder is fairly accurate, but at four feet it does not tell correctly what is going to appear on the film.

Accurate View Finding

The thing to do, then, is to get the object squarely in the view-finder at the longer range with an even space all round it. Then move the camera straight forward, that is nearer in to the object on a straight line and make the exposure without bothering further with the finder.

Now comes the exposure. Films can be obtained so cheaply nowadays, that it is quite worth while to make a series of exposures.

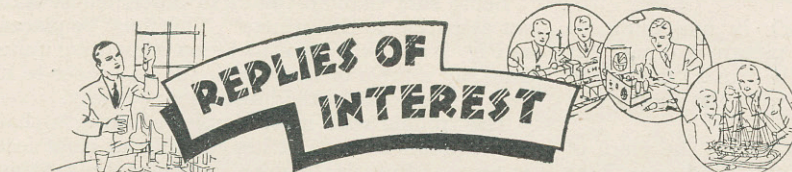
The shutter is, of course, opened at "time" and is left open for anything between 15 seconds and a minute and a half according to the light and colour of the subject.

Round mid-day during the winter (sun shining outside) you will not go far wrong to give 30 seconds by a watch.

However, the best thing is to make a series of exposures—one, say at 15 seconds, the next at 30

and the next at 45. One of the negatives is sure to stand out better than the rest, and this will be the negatives to make prints from. This method works out cheapest in the end as there is nothing that wastes printing paper like trying to get good prints from a poor negative.

Another way of making the exposure is at night by artificial light, with the subject at about eight feet from a gas burner or electric light. A good result with the tiny stop can be obtained by leaving the lens open for 15 to 20 minutes. Fig. 3 was taken this way.



A selection from
letters sent by
readers for expert
advice on popular
subjects

Underwater Boat Drive

I AM interested to know how a model boat can be worked by underwater electro-magnet?—(J.B.)

THERE are several ways of working small model boats by means of submerged magnets. One method very frequently used is to affix a small piece of iron or steel to the underside of the boat. The tank is made of zinc or non-magnetic metal, and beneath it is a powerful electro-magnet mounted on runners or a guide, and so arranged that it is moved along gradually. The iron on the boat is attracted towards the magnet, and is thereby moved as desired. Another system has several magnets fixed in place and energised in sequence by means of a rotating or other switch. With this arrangement the boat can be made to follow almost any desired course, all that is then necessary is to energise the magnet on whichever side it is desired to attract the boat.

Silver Soldering

DURING the time of learning steel brazing, I have also heard of silver brazing and silver soldering. Although I have tried, I cannot find the way to do same, or obtain books giving instructions on how to do silver brazing and silver soldering.—(N.V.P.)

WE have not heard of the term "silver brazing" and think there must be some mistake here as brazing is actually to do with brass—hence the term. Silver solder is composed of 8 parts silver 3 parts copper and one part zinc. The method of silver soldering is as follows:—clean thoroughly all the parts that are to be soldered, then

cover the solder and the joint with borax. The powdered form of borax can be obtained from any chemist, and this should be mixed with water to the consistency of cream and applied with a small brush. The work must now be made red hot with a blow-pipe in order to cause the solder to run into the joint. When the joint is completed the work should be cleaned in a pickle composed of one part sulphuric acid and two parts of water in which it should be immersed for 30 minutes.

Chemical Names

AT what temperature does milk freeze, and could you please tell me the chemical names for Glauber's Salts, flour, whiting and baking soda, pepper, sugar, brown sugar, mastic cement, coal dust, cornflour, vinegar, paraffin oil, cream of tartar.—(L.S.)

MILK freezes at a temperature of about .54 degrees Centigrade. Glauber's Salts is Sodium Sulphate. Flour has no real name in chemistry. Its constituents include various proportions of Nitrogen, Gluten, Soluble Extract (including a small proportion of oil) and soluble phosphates. Whiting is a finely pulverised preparation of chalk purified by washing. Baking soda is Sodium Bicarbonate.

Home Broadcasting

I HAVE made a microphone with two terminals, similar to the one in *Hints and Tips* of January 16th, 1937, and am at a loss to fix it up for broadcasting.—(R.F.)

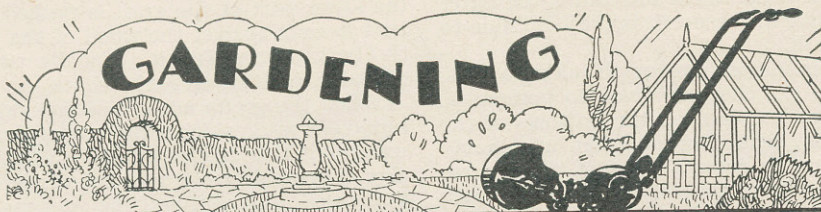
YOU cannot use this mike for proper broadcasting, but only for use through a wireless set. Connect to the pick-up terminals of the set, or if these are absent,

remove the wire to the grid of the first valve, connect one side of the mike to the grid, the other side goes to a suitable value of grid bias. Use a volume control as described in back numbers.

Preserving Larvæ

I SHOULD be much obliged if you could tell me of a satisfactory method of preserving the larvæ of moths and butterflies in liquid.—(K.S.)

YOU certainly will find it messy to extract the internal parts of the larvæ or caterpillars of moths and butterflies and then dry and colour the blown-up skins. Obtaining or retaining the natural colour is the great difficulty with all forms used for preserving the larvæ, whether they be preserved in methylated spirits, glycerine, etc. One method is to kill the larvæ by immersing it in some methylated spirit, then by means of a crochet hook or darning needle bent, or anything suitable, extract the internal contents through the anal orifice, then inflate through the anal orifice with a fine glass nozzle and dry as quickly as possible before the fire or in a gas oven. Where colouring is added through fading, it is usually put on the inside of the skin and the larvæ mounted on an artificial leaf so as not to show an incision in its abdomen. An easy way to expel the internal contents is to insert a needle in the anal aperture, stir up the intestines, etc., then gently roll a glass tube over the larvæ to force these out through the enlarged anal aperture. If an arrangement can be made so that the inflation of the skin through the fine glass nozzle can be kept up during the drying process, there will be less risk of failure.



The Vegetable Plot

THERE is plenty for the keen amateur gardener to do in all departments during April.

Lettuce seed may be sown in the open during this month. A light good soil is the best for lettuces, but with a little care almost any land will grow good crops. The best way to go to work is to dig over the land deeply and about eight to ten inches down work in some manure. It is a mistake to work in the manure near the surface.

The roots of the young plants will then reach the manured soil at just the right stage of growth and will grow strongly without running to seed. Sow the seed in shallow drills about a foot apart.

Celery

Celery trenches should be prepared during this month. A part of the plot should be chosen not too far from a supply of water, for celery is a thirsty plant in dry weather.

The trench should be ten or eleven inches deep and about a foot wide if it is to contain a single row of celery and eighteen inches wide for a double row.

Well rotted manure is laid along the bottom of the trench to a depth of five or six inches, this is well trodden down and covered with soil so that when finished the top of the soil in the trench is within an inch or two of the surface of the ground.

If there is a piece of poor land on the garden this will be just the right place to grow a crop of onions for pickling. The plot should be dry and should be dug, trodden

and raked to a very fine tilth. Sow in shallow drills six inches apart and do not thin the plants at all.

Asparagus beds should be given a dressing of salt, and new beds may be made. The piece of land where the beds are to go should be well dug and if possible manured, and two long ridges formed eighteen inches apart.

The asparagus crowns are placed along the ridges at distances of fifteen inches apart and soil from each side of the bed filled in quickly so that the crowns are about four or five inches beneath the surface of the bed when the work is completed.

Carrots and Beans

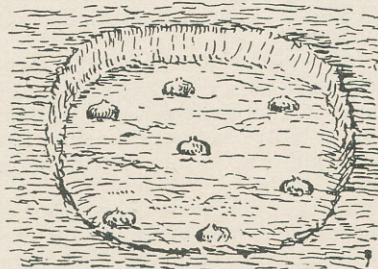
The main crop of carrots should be sown on a warm sunny day on land which has not been manured and potato planting should be finished before the end of the month.

Sowings of Dwarf French and Climbing French beans may be made in sheltered sunny positions, but where the site is at all exposed it is better to wait a little longer.

Among the Flowers

SEEDLING asters which have formed their third leaf are ready for pricking out round the edges of size 60 pots. Later they should again be planted in smaller pots when they may be put out in the garden at the right time without any check at all.

It is as well to look round for plants which need staking. In the herbaceous border delphiniums



Planting Gladioli in groups

and lupins should be given support in this way.

A point about staking is that the stakes used should be neat and tidy and in the case of many large clumps they need not be seen at all. When clumps of plants are being staked, it is a good plan to use three light stakes placed in triangular form round the plant but hidden by the foliage, soft string is tied from stake to stake, in this way giving the plant support without spoiling its natural appearance.



SEEDS TO BE SOWN

Flowers

Balsam, middle of month.
Canterbury Bell, in good soil.
Carnation, in a sweet friable compost.
Margeurite or Ox-eye Daisy.
Marigolds, end of the month.
Mignonette, this month.
Ten-week Stock, in open, end of month.
Sunflowers, where the plants are to remain.
Zinnia, during the first week.

Vegetables

Asparagus, any time this month.
Winter greens, early in the month.
Onions, well prepared beds.
Celery, on a gentle hotbed.
Parsley, early in the month.
Globe beetroot, in small quantities.
Peas, early in the month.
Perpetual Spinach, lettuce and endive

Early in April in the south and during the latter part of the month in the north is the best time to plant out gladioli.

These beautiful flowers are worth taking a little trouble over to get them to grow to perfection. It is a good plan to place on the bottoms of the holes where the gladioli corms—often mistakenly called bulbs—are to grow a layer of wood ashes and sand well mixed, the depth should be such that when the corms are planted the growing point will be about four inches beneath the surface.

Fruit

IF any of the fruit trees on the fruit plot are not good kinds or do not yield as they should, April is the best time to cut these back and regraft with better varieties. Grafting is not nearly as difficult as is sometimes thought. With a little care it is quite possible to do the work successfully without expert help.

Crown grafting is the most straightforward and satisfactory method. About three or four inches from the bottom the graft is cut almost halfway through, the knife is then turned sharply downwards so that the part below this cut forms a flat pointed surface.

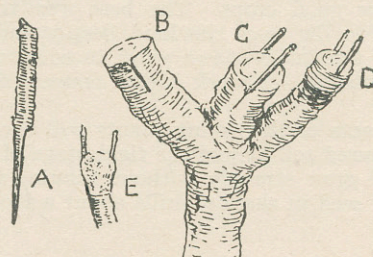
Grafting

The branch to be grafted is cut back to within a foot or so of the main stem and from the cut surface a slit is made in the bark downwards for three or four inches. The bark on each side of this slit is raised with the blade of the knife and

the lower part of the graft is pushed into this so that it rests against the wood of the branch with the bark overlapping it. Usually two grafts are placed in position on each branch.

When the grafts are in position raffia is bound round the work which is then covered with grafting wax, or if this cannot be obtained in the district, clay is pressed firmly over the whole and answers quite well, although grafting wax makes rather a neater job of the work.

In the picture, the prepared graft is shown at A to scale larger than the rest of the drawings. At B is the slit in the bark ready to take the graft, of which two are in position at C. At D, they are bound with raffia and then covered with clay (E) to complete the work.



If black currant bushes are attacked with big bud it is a good plan to spray them with lime sulphur as soon as possible as this will clear them of the disease, although it may take two years to do so if the trouble is really bad.



FRETWORK COMPETITION WINNERS

WE were delighted to find such a large number of entries in our Annual Fretwork Competition, and in consequence the judging took considerably longer than we had anticipated.

We hope, therefore, those readers who have been eagerly awaiting the result will not have lost all their patience, and will now realise what a job it has been to eliminate those who were not quite up to the standard of the prize-winners.

Altogether, the standard was good, but as usual, lack of attention to the minor details of cutting and finish lost many points for what were otherwise excellent pieces of work.

The cup, of course, is the great award in this competition, and it is to be noted that this year the cup holder has not been able to retain her championship. It was a lady last year—Miss Winifred Webber—and she has been overcome by three other cutters of undoubted ability and experience.

She will, however, be the first to congratulate the new holder who is Mr. H. Spencer of Evington Park Road, Leicester. In addition to holding the handsome trophy cup for a year, he is

presented with a small replica of it which he holds for all time.

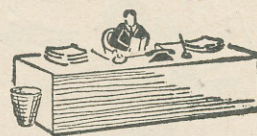
The actual award is made on the cutting, with points added for any special outstanding effort at finishing. Those who have not had years of experience may feel that their cutting is not equal to such a competition as this. We can assure them that in every case consolation prizes are sent if we think the standard of cutting warrants it.

The list of principal prizewinners is given below, and all the awards have been forwarded already to these winners. In addition, of course, a number of consolation prizes have been sent, and in all cases where postage was included the actual entry has been returned to its owner.

Principal Prizewinners

1st, H. Spencer, Evington Park Road, Leicester ; 2nd, Joseph Keen, Lathom Road, East Ham, E.6 ; 3rd, Ernest G. Martin, Priors Lee Road, Oaken-gates, Shrops. ; 4th, R. Dixon, Highmore Road, Sherborne ; 5th, Winifred M. Webber, Cannington, Nr. Bridgwater ; 6th, F. G. Henry, Nixon Street, Newcastle-on-Tyne ; 7th, Mrs. W. Owens, Hinder-ton Road, Birkenhead ; 8th, Eric H. Vernon, Rutherford Road, Mossley Hill, Liverpool ; 9th, Wm. U. Easton, East Row, Eston, Middlesbrough ; and 10th, Arthur G. Law, East Grimsby, Arbroath, Scotland.

The EDITOR'S NOTES



IT is some time now since we had a musical instrument as the subject of our weekly Design Sheet, so I am sure the one with this issue is going to be very popular. It is always a source of curiosity to people that tunes can be produced from an instrument with one string only. It is equally pleasing to be able to make and play such an instrument for your own or other people's amusement. Whilst it is, of course, difficult to attain the wonderful proficiency you sometimes see of players on the stage, or even in the street, there is no reason why even an average individual should not be able to master it sufficiently to have a wide range of tunes he can play. Not only do we provide the necessary wood and patterns, but also can let you have a special book showing you how to learn to play and a number of tunes you can soon master.

THIS week too, is the second of our four Picture Puzzles, which I feel sure are going to make a popular competition. I shall extend the number of prizes as the number of entries demand, so I want everyone to enter and try to win one.

THOSE thousands who have made a model of the "Cutty Sark" from our design will be interested to learn that famous ship is to end her days in the Thames as a training ship for boys for the Navy and Merchant Service. It has been lying off Falmouth, Cornwall since 1922, but will in future be alongside the training ship "Worcester" at Greenhithe. The Thames seems to be becoming the final resting place for many famous ships of history, for "President," and recently the "Discovery" (Capt. Shackleton's famous exploration ship) already lie and serve a useful purpose again alongside the Embankment.

IT seems a far cry to the foot of the Andes Mountains in South America, or to connect them with modern harmonica bands and Hobbies Weekly. But there is a connection, and it proves again the interest of readers in our pages all over the world. The popularity of these bands—now an absolute craze with our George! — and mention of it in Hobbies Weekly, have

brought a cry from a lady who wants to start one in her little village which lies at the foot of the mountains in Chile. She wants to know how to get the instruments, how much they would cost, how they are played, and so on. Evidently our lady friend is keen to be quite modern and I have no doubt the information I am sending her will produce the latest jazzy and dance music in those little known parts. Good luck to her, and her band!

HAVE you noticed that the first page of this issue is No. 1? It begins Vol. 86, and last week's issue completed the last of the previous six months. So now you can begin to think of binding your 26 Hobbies to make a book of them. The Index of the Vol. 85 is now in hand and will be ready within a few days. It contains detailed information of all the articles which have appeared and is a simple and useful source of reference. It only costs 4½d., post free. There are also two types of binding cases—one which you can complete yourself and the other in which the issues are properly bound by any newsagent for you. Full particulars of cost can be had on application.

READERS who contribute to our Hints and Tips page are occasionally sending in recommendations for the betterment of fret-saw blades. The suggestion is to rub them with candle grease, or to run them through a flame to improve their temper. So I have put the matter up to our expert who actually manufactures them and who, you will agree, should know best about them after a good many years' experience. Well, he tells me, as I expected, that our saws are very carefully and correctly made and tempered, and that any further treatment cannot affect their

quality. So those who have been doing these things to their blades have not really been effecting anything which did them any good. Indeed, the likelihood is that it only did harm! The blades made by Hobbies Ltd. go through a series of specialized and secret processes which account for their being superior to any kind. Which, in turn, accounts for their use all over the world.

The Editor

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Correspondence should be addressed to: The Editor, Hobbies Weekly, Dereham, Norfolk, and a stamp enclosed with the Reply Coupon from Cover iii if a reply is required. Particulars of Subscription rates, Publishing, Advertising, etc., are on cover iii.



THE FUN AND PUZZLE PAGE



What bones never have meat on them?

I'm bones.

Why is a teapot like pulling a dog's tail?

Because your tea's in it (teasing it).

GOOD FOR THEM

Jimmy was being reproved by his mother. She said: "I've told you often enough, those Smiths are bad boys for you to play with."

"But I'm a good boy for them to play with," said Jimmy.



LANGUAGE!

Sonny: "Mother, Dolly is using fearful swear words."

Mother: "What did she say?"

Sonny: "She said she wouldn't wear those darned stockings any more."

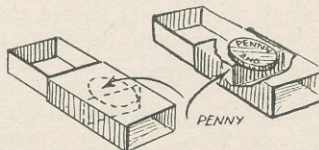
* * * *

What's the difference between a fog and a guest?

One is a mist and the other's a mister.

A PENNY TRICK

Place a penny as shown by the dotted line. Show the box open to your pals, shake it and shut the box quickly. Give it to one of your pals and watch his face when he finds the penny in it. It has been lodged, of course, between the top and the edge of the tray.



WORN OUT

A little girl, on being told that Auntie May had a new little baby, said:

"Why, what was the matter with the old one?"

IS IT?

Coming home from school along a country road, a little boy and girl found themselves confronted by a herd of cows. The small girl was for instant flight.

"Oh, come on," said the boy bravely "cows'll never hurt you."

The little maid hesitated, anxiously regarding the foremost cow which surveyed her placidly. Then edging farther away she said "Yes, but when a cow looks at you like that, it's a bull!"

WHAT?

"Daddy," said a little girl, "If a doctor doctored another doctor, would the doctor doing the doctoring doctor the other doctor in the way the doctored doctor wanted to be doctored, or would the doctor doing the doctoring doctor the other doctor in his own way?"

FIGURE PUZZLES

How can four eights be written so as to make 100?

The solution is $88 \times 88 = 7744$

Point eight is, of course, eight-tenths and then the rest of the working will be obvious to any schoolboy. Now write down four nines so as to equal 100.

Here is the solution $99 \frac{9}{9} = 100$

* * * *

Why are fishermen and shepherds dishonest?

They live by hook or by crook.

What is it we all often say we will do, and nobody has ever yet done?

Stop a minute.

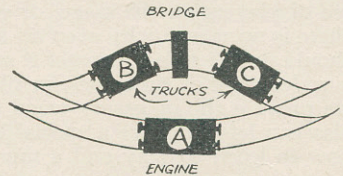
SOLUTION

The answer to the Shunting Puzzle is as follows:

The engine went behind B and pushed it under the bridge. It was then unhooked and came away by itself to C which it pushed up to B and brought the two down to the position of A in the diagram. B was unhooked and C and the engine were made to travel up to the bridge and C was pushed under it. The engine now came back and took B to the initial position of C. Then the engine went back to its original position.

A SHUNTING PUZZLE

Puzzles about shunting trucks on railway sidings are usually entertaining. Here is one that is not too difficult. The engine A is required to shunt truck B to the position of truck C and place C where B is now. There is one trouble, however. The engine cannot go under the bridge, although



the trucks can. How did the driver manage?

The answer is at the foot of Column 2 if you cannot solve it for yourself.

* * * *

When does a man weigh most?

When he is heaviest.

Why are fishermen wealthy?

Because theirs are all "net" profits.

QUITE RIGHT

Seeing the figure of a drunken man staggering along the street, Johnny asked his mother: "Did God make that man?"

"Yes, dear," was the reply.

Pause.

"I wouldn't have," said the boy.



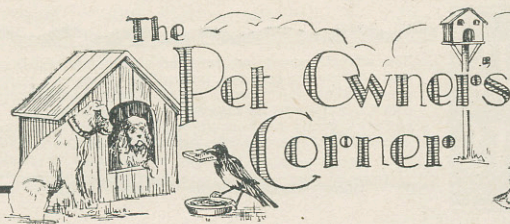
TINNED!

The visitor had told Tommy that his work was in Switzerland, for the firm of Nestle. Tommy was immediately interested.

"Do you have to mind the cows?" he asked.

"No, not exactly," was the amused reply.

"I expect it must be awfully difficult work," pursued Tommy; "isn't it very hard to make the cows sit on those little tins?"



FIRST BIRD MIGRANTS

ONE of the greatest misfortunes for English nature study is that Gilbert White was born in and lived in the south. Not that the North has any shortage of nature-students, but for generations British nature-lovers have aped the ways of the Sage of Selborne. They have taken his Natural History more or less as their Bible, with the result that an utterly wrong and one-sided impression of many of nature's doings have become deeply rooted in public opinion.

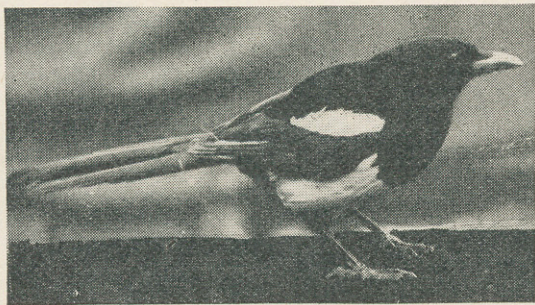
More people live in the North of England than the South, yet the works of Pennant—the Flintshire naturalist-correspondent of White—(whose "zoology" taught White most of his natural history), are almost forgotten.

Now the spring bird migration is approaching, the public attitude to the subject once more looks at it from the completely southern aspect and so we are told, as we have been told in error for years, that first homecomers are the wheatear of the downs the chiffchaffs of the woods, the ring-ouzes, the swallows, cuckoos and so on.

The Two First

With never a mention of these birds that are really the first bird migrants to reach home. Bird migration is the journeying between a spring and summer nesting place and a winter haunt.

The two birds first home again to their nesting places from their long migrations are the gannets and fulmar-petrels, beautiful big white seabirds of our rocky coasts. Time was—in Gilbert White's days—when these birds were very rare.



Long-tailed, chattering, black and white magpies

Now they are very numerous and are increasing annually, forming new nesting colonies around our coasts.

The gannets and fulmars quit their nesting places in the late summer or autumn and winter in the lonelier waters. Those of the west of Britain go as far south as Biscay Bay, Spain, Gibraltar and

North-West Africa. Those from our East coast go to the Baltic Sea and Norway.

They are back home again about the end of February or early March, but at the Bass Rock returns have been made as early as the second week of January. The fulmars, which also winter at sea, usually return in February, sometimes in January, and last year off the Northumberland coast they came back just before the New Year.

The gannet is a huge white diving seabird, with black-tipped wings, a long greenish, rapier-like beak without any visible nostrils. The fulmar is an albatross-like bird with a tubed-nostril, as has the storm-petrel and Manx shearwater, though to many it looks like a big, thick-set gull gliding much more often than other gulls.

Increased Numbers

Both these birds have increased greatly in recent years, down as far as Yorkshire. The fulmar now nests regularly on the Northumberland Farnes, and the Isle of Man and the Irish coast, and probably also Pembrokeshire, though in 1870 the fulmar's only nesting place in Britain was at Foula near St. Kilda.

Gannets nest in great colonies as Grassholme in Cardigan Bay, Bass Rock in Firth of Forth, Ailsa Craig near Glasgow, the Skelligs, Saltees, St. Kilda and other rocks.

Other Arrivals

Nor are these the only birds earlier than the conventional "earliest" firstcomers. The handsome garganey teal of the quiet open freshwaters, and the spotted crake, a shy relative of the waterhen that seeks the denser reed-beds of Norfolk, parts of Wales and other counties, arrive here about mid-March. The yellow-billed Sandwich-tern, largest of our native British terns or sea-swallows, which winters in West Africa, usually arrives home before the traditional wheatear or chiffchaff. He comes to our northern sandy headlands about the end of March or early April, for despite its name, far more Sandwich terns now nest in North Britain than the South, where they are almost extinct.

From France and Spain

Even before the wheatears put in an appearance parties of meadow-pipits and pied wagtails that have wintered in France and Spain when birds from further north took their place in England, reach our land in January, February and March.

Likewise in the North song thrushes, lapwings, snipe, curlew and other birds arrive from their Irish winter quarters before the homecoming of wheatear and swallow.

MISCELLANEOUS ADVERTISEMENTS

The advertisements are inserted at the rate of 2d. per word prepaid. Name and address are counted, but initials or groups, such as E.P.S. or £1/11/6 are accepted as one word. Postal Order and Stamps must accompany the order. They will be inserted in the earliest issue. To sell anything except fretwork goods or those shown in Hobbies Handbook. Orders can be sent either to Hobbies Weekly, Advertisement Dept. 80/32 Ludgate Hill, London, E.C.4, or Dereham, Norfolk.

100 STAMPS, all different, free to approval applicants sending 2d. postage.—**Errington Macquire** (O), 51 Atkins Road, London, S.W. 12.

25 STAMPS FREE, request approvals.—**C. R. Murfin**, 164 Uttoxeter Old Road, Derby.

APPROVAL BOOKS containing 1,000 really good stamps at 5/- per hundred, specially prepared for junior collectors, also better ones.—“**Duplicates**,” 54 The Downs, Altrincham, Cheshire.

LONELY? Then write Secretary; U.C.C. 16 B.B., Cambridge Street, London, S.W.1. Genuine Establd. 1905.

BRAND NEW CABINET MAKER'S 4in. Precision Planing Machines, £4. Motorised, £7. Electric Motors; Paint Spray Plants; Drilling Machines, etc.—**John H. Steel**, Bingley.

READ the “Stamp Collectors Fortnightly.” Editor **Fred J. Melville**, for lively articles and latest news, 5/- annually or 2d. fortnightly from your newsagent. Specimen from “S.C.F.” 44 Bedford Row, W.C.1.

50 DIFFERENT Coronations 9/-. If sheets ordered 100 Free Stamps including Jubilee Canada, Coronation New Zealand. Big discount. Cheaper than buying from shops.—**A. H. McAuslan**, Stepps, Glasgow.

GLUE. Hobbies glue is as good as 25 years' experience can make it. Sticks wood, china, leather, etc. In tubes 6d. and 2d.—**Hobbies Ltd.**, Dereham.

TURN SPARE TIME INTO MONEY! “Business Chances” Magazine tells how you can be independent. Send 1/- for six months trial subscription and 32 page catalogue of money-making opportunities to:—**Manager**, 15 Old Barn Road, Bournville.

WANTED original poems, songs, for immediate consideration. Send poems to **Columbian Music Publishers, Ltd.**, Dept. 280, Toronto, Canada.

ELECTRICITY IS LIFE! Make Electric Belts at a cost of 1/-. Complete Instructions, 1/6.—**Box No. 123.**

MOVIES AT HOME. How to make your own Cinema Projector. Particulars free.—**Movioscope (H)**, Pear Tree Green, Doddinghurst, Essex.

THE WORLD'S MOST POPULAR FRETWORK SET—**Hobbies A1**, price 10/6; post 9d. Other sets from 1/6 to 21/-. Send for list.—**Hobbies Ltd.**, Dereham.

LATHE AND FRETSAW 95/- carriage forward. Treadle-driven and just the thing for the home handyman. Write for details.—**Hobbies Ltd.**, Dereham.

COLLECTOR'S surplus Cigarette Cards for sale, wanted for cash, very old cards.—**3 Waymouth Villas**, Moray Road, London, N.4.

STAMP APPROVALS, 1/4d. upwards, half catalogue price.—**Vectis Stamp Supply**, Binstead, I.O.W.

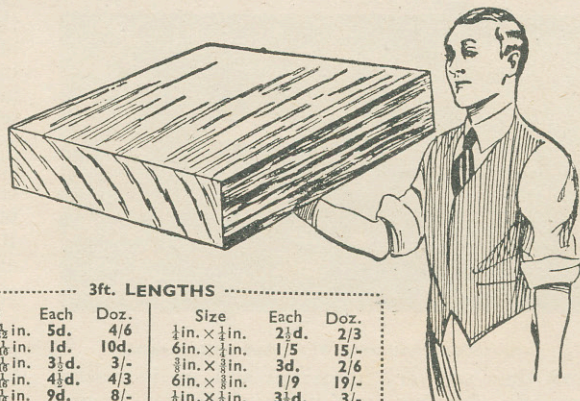
WHY NOT TREAT YOURSELF to a fretmachine? It will double your output in half the time. Prices from 30/- cash or easy payments.—**Hobbies Ltd.**, Dereham.

Half the Weight of CORK!

This amazing timber is now obtainable from Hobbies at keen prices. It is easy to work with knife or saw and is the wood for the model aeroplane builder. Useful too for making model boat hulls, toys and 101 other things.

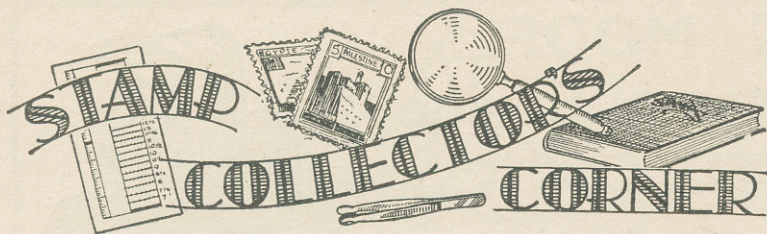
You can buy it from any Hobbies Branch or Agent or direct by post from **Hobbies Ltd.**, Dereham. See note at right.

BALSA WOOD



3ft. LENGTHS					
Size	Each	Doz.	Size	Each	Doz.
3in. x 1/8in.	5d.	4/6	1 1/2in. x 1/8in.	2 1/2d.	2/3
1 1/2in. x 1/8in.	1d.	10d.	6in. x 1/8in.	1/5s	15/-
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MOUNTAINS ON STAMPS

IF one looks at a list of the highest mountains in the world it is surprising what a number of them are to be seen on postage stamps.

Bolivia has the distinction of showing the highest, this is the first illustration Illimani. Naturally it is situated in the country which illustrates it, in that vast chain called the Andes. Its height is 24,633ft.

In the same set, that of 1916, we have a picture of Potosi, another mountain in this vast volcanic chain. Although Potosi is not so high as Illimani yet it makes a better picture because the shape is almost conical, and nearly 19,000 ft.

There is a town of the same name built on the slopes of the mountain at a height of nearly 14,000 ft. It was founded in 1547 after silver had been discovered. Tin and copper are also found in the neighbourhood.

In the same chain, the Andes, is another mountain illustrated on stamps which is over 20,000 ft. and that is Mt. Chimborazo. This is seen on the 1 sucre of the 1908 issue of Ecuador and again on the 1934 issue.

Other countries which display peaks in this part of the volcanic girdle of the Pacific are Peru, with Arcuipa shown on the 4 centavos of 1932, and Chile, with Mt. Puntagorda on the 1p. 20c. On

It shows an enormous statue of Christ which is found in the Andes between Argentine and Chile.

Leaving south for central America, an excellent idea of the mountainous character of this region is obtained from the 1c. stamp of the 1915 issue of Panama. This stamp shows a relief map of the area of the Panama Canal.

When the idea of a canal was first introduced there was of course a lot of competition among the Central American Republics as to who should have the canal.

Nicaragua badly wanted it, and in support of their claim they pointed out that quite a distance of the route was already prepared. There was Lake Managua and Lake Nicaragua and moreover the River San Juan flows from Lake Nicaragua into the Caribbean Sea.

Actually in 1916 the United States Government purchased an option on this route. When, however, the final decision as to the whereabouts of the canal was made, the story is told that a stamp decided the issue.

Against the denial of the Nicaraguan favourites that there were active volcanoes in the area, someone produced for inspection a specimen of the 1c. of the 1900 issue which shows the volcano Momotomba in eruption!

Rather a pretty stamp is the

United States of America. The first mountain scene which they depict is somewhat difficult to name accurately—the 5 cent of the 1892. Commemorating the Trans-Mississippi Exposition it is entitled Fremont on the Rocky Mountains, and as readers will agree this is quite a long range. But the story of Fremont gives a clue to its identity.

Lieut. John Fremont was sent by the Government to find a good route over the southern end of the Rocky Mountains to San Francisco. On the way they saw two herds of buffaloes fighting, they watched and then saw what at first they thought were more buffaloes coming, but which turned out to be Indians.

Luckily one of the party recognised the chief, who also recognised Fremont's man so they proceeded to Fort Laramie. Here they had news that the Indians of the Gros-Ventre, Cheyenne and Sioux tribes were on the war-path.

They stayed for a time at the Fort, then Fremont decided to brave the danger and got ready to start. During these preparations Fremont received further warning from an interpreter who was to have been his guide. But Fremont neglected the advice and went on.

Though they were not attacked they found the journey terrible and all but six returned to Fort



The highest in the Album A Relief of the Panama Canal This stamp altered the Canal The highest Rocky Peak

the same set there is a view of the Atacama Desert, which is the counterpart of the great plateau desert in North America.

Reference ought to be made here to the Andean reference from Argentine. It was illustrated in these columns sometime ago on the occasion of the 32nd International Eucharistic Congress.

6 centavos of the 1930 of Guatemala which shows Mt. Agua. But it is certainly beaten by the 1 peso of Mexico 1899 which gives us a view of Mt. Popocatepetl, a famous volcano.

Salvador has its contribution—Mt. Izalco on the 1 centavos of 1935.

Now we must pass on to the

Laramie. These six went on and found what is now known as the Colorado River. Still Fremont was not satisfied and resolved to climb the high peak he saw ahead. He did not know he had climbed the highest peak in the Rocky mountains—now called Fremont's Peak—13,590 ft. above sea level.

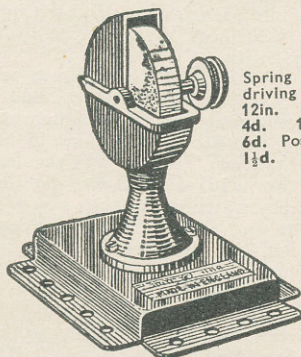
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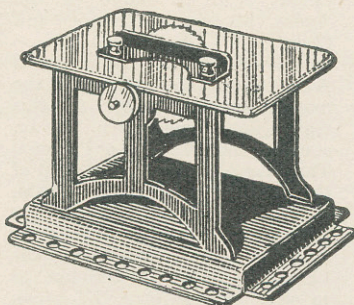
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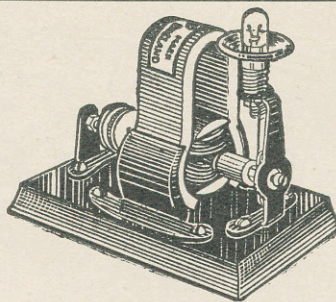
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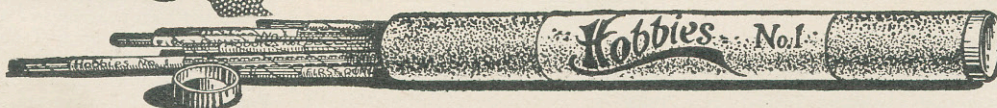
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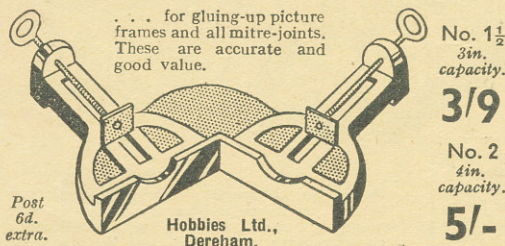
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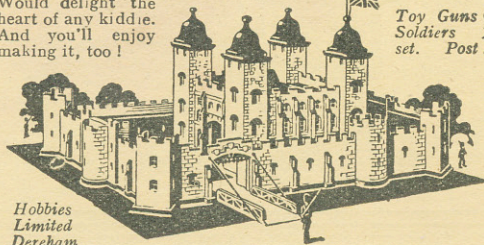
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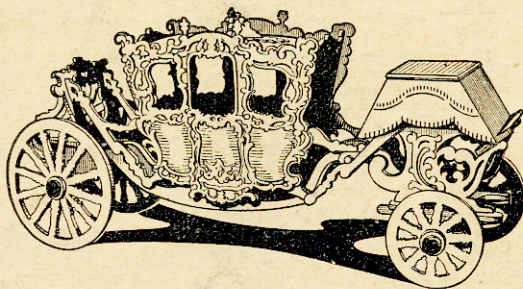


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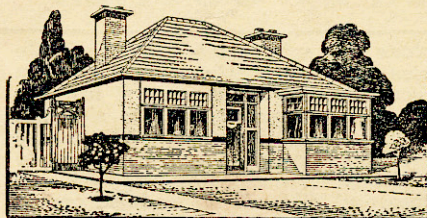
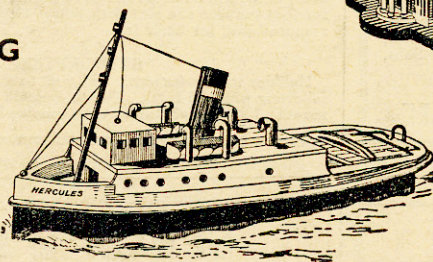


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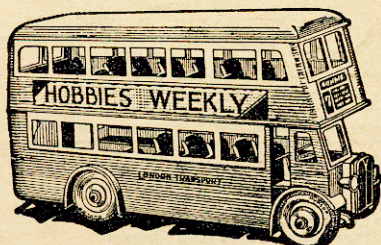
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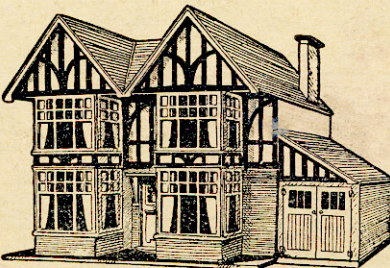


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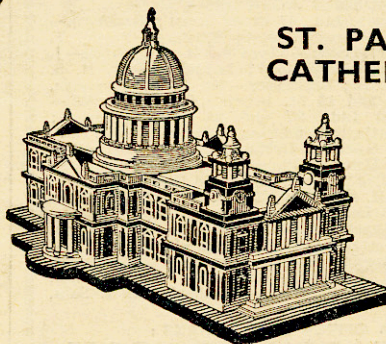
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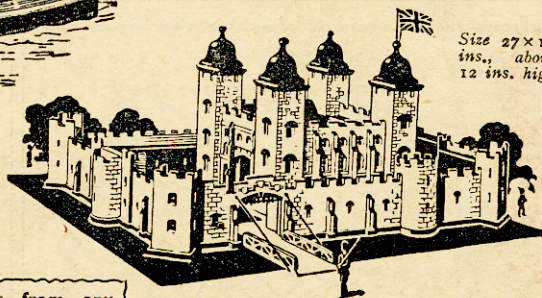


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